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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,486

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Yuji Sano

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EXAMINER

BECK, ALEXANDER S

ART UNIT

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2629

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/652,486	<b>Applicant(s)</b> SANO ET AL.	
	<b>Examiner</b> ALEXANDER S. BECK	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 31-34 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-34 and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Acknowledgment is made of the amendment filed Dec. 13, 2007, in response to the Office action mailed Jul. 13, 2007, and in which claims 31 and 37-39 are amended. Claims 31-34 and 37-39 are currently pending and an Office action on the merits follows.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 31-34 and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,011,355 to Nagai ("Nagai").

As to claim 31, Nagai discloses a plasma display apparatus in Figures 19-24 comprising: a plasma display panel having at least a pair of electrodes making up a capacitive load (Cp, 12) and causing discharge to occur between the pair of

electrodes (Nagai, col. 22, ll. 8-12); and a capacitive load drive circuit (103, 105) connected to at least either one of the pair of electrodes and driving the capacitive load (Cp, 12), wherein the capacitive load drive circuit (103, 105) has a coil (L, 11) connected between an output terminal to be connected to the one of the pair of electrodes and a reference potential (e.g., any one of Vcc or grounding terminals) and controls so that when the energy stored in the capacitive load (Cp, 12) is discharged, the energy is stored in the coil (L, 11) and at the same time the energy is retained in the coil (L, 11) while the current (iL) flowing through the coil is (L, 11) increasing (Nagai, col. 22, ll. 21-26), and when the capacitive load (Cp, 12) is recharged, the energy stored in the coil (L, 11) is released while the current (iL) flowing through the coil (L, 11) is decreasing (Nagai, col. 22, ll. 26-28), and wherein the energy is stored in the coil (L, 11) via the one of the pair of electrodes when the energy stored in the capacitive load (Cp, 12) is discharged, and the energy released from the coil (L, 11) is supplied to the capacitive load (Cp, 12) via the one of the pair of electrodes when the capacitive load (Cp, 12) is recharged (Nagai, col. 22, ll. 7-28).

As to claim 32, Nagai discloses wherein a switch circuit (e.g., D1, S1, D2, S2) maintaining the discharged state of the capacitive load (Cp, 12) after the capacitive load (Cp, 12) is discharged and until it is recharged, and a power supply switch circuit (e.g., S3, S4, S5, S6) maintaining the charged state of the capacitive load (Cp, 12) after the capacitive load (Cp, 12) is charged and until it is discharged again (Nagai, Figs. 19-23).

As to claim 33, Nagai discloses wherein the switch circuit (e.g., D1, S1, D2, S2) is comprised of a one-way conductive element (e.g., D1, D2) (Nagai, Figs. 19 and 21-23).

As to claim 34, Nagai discloses wherein the power supply switch circuit (e.g., S3, S4, S5, S6) is controlled so as to be brought into a conductive state before the charging of the capacitive load (Cp, 12) is completed (Nagai, Figs. 19-23).

As to claim 38, Nagai discloses the capacitive load drive circuit (103, 105) further comprising: a first switch circuit (e.g., any one of D1/S1 or D1/S2) connected in series between an output terminal to be connected to the pair of electrodes (Cp, 12) and one end of the coil (L, 11); a second switch circuit (e.g., any one of D1/S1, D2/S2, S3, S4, S5 or S6) connected between a first end of the coil (L, 11) and the reference potential (e.g., any one of Vcc or grounding terminals); a third switch circuit (e.g., any one of D1/S1, D2/S2, S3, S4, S5 or S6) connected between a second end of the coil (L, 11) and the reference potential (e.g., any one of Vcc or grounding terminals); wherein the first, second, and third switches are controlled to store energy in the coil (L, 11) and to release the stored energy from the coil (L, 11) (Nagai, Figs. 19-23).

As to claim 39, Nagai discloses wherein the capacitive load drive circuit (103, 105) further comprises a fourth switch circuit (e.g., any one of D1/S1, D2/S2, S3, S4, S5 or S6) connected between the second end of the coil (L, 11) and the output terminal (Nagai, Figs. 19 and 21-23).

4. Claims 31 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,324,100 to Lee ("Lee") (Note: Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.)

As to claim 31, Lee discloses a plasma display apparatus comprising: a plasma display panel having at least a pair of electrodes making up a capacitive load ( $C_p$ ) and causing discharge to occur between the pair of electrodes; and a capacitive load drive circuit (200, 210, 300, 400) connected to at least either one of the pair of electrodes and driving the capacitive load ( $C_p$ ), wherein the capacitive load drive circuit (200, 210, 300, 400) has a coil ( $L$ ) connected between an output terminal to be connected to the one of the pair of electrodes and a reference potential (e.g., grounding terminal) and controls so that when the energy stored in the capacitive load ( $C_p$ ) is discharged, the energy is stored in the coil ( $L$ ) and at the same time the energy is retained in the coil ( $L$ ) while the current ( $I_L$ ) flowing through the coil is ( $L$ ) increasing, and when the capacitive load ( $C_p$ ) is recharged, the energy stored in the coil ( $L$ ) is released while the current ( $I_L$ ) flowing through the coil ( $L$ ) is decreasing, and wherein the energy is stored in the coil ( $L$ ) via the one of the pair of electrodes when the energy stored in the capacitive load ( $C_p$ ) is discharged, and the energy released from the coil ( $L$ ) is supplied to the capacitive load ( $C_p$ ) via the one of the pair of electrodes when the capacitive load ( $C_p$ ) is recharged (Lee, Figs. 3-6).

As to claim 37, Lee discloses wherein the pair of electrodes are a plurality of scan electrodes and a plurality of address electrodes arranged so as to intersect the scan electrodes; wherein the capacitive load drive circuit (200, 210, 300, 400) comprises: a scan electrode drive circuit (300) driving the plurality of scan electrodes; and an address electrode drive circuit (200, 210) driving the plurality of address electrodes, wherein the address electrode drive circuit (200, 210) has a coil ( $L$ ) connected between an output terminal to be connected to the address electrode and a reference potential and controls so that when the energy stored in the capacitive load ( $C_p$ ) consisting of the address electrodes and the scan electrodes is discharged, the energy is stored in the coil ( $L$ ) and at the same time

the energy is retained in the coil (L) while the current ( $I_L$ ) flowing through the coil (L) is increasing, and when the capacitive load ( $C_p$ ) is recharged, the energy stored is released while the current ( $I_L$ ) flowing through the coil (L) is decreasing (Lee, Figs. 3-6).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 31-34 and 37-39 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER S. BECK whose telephone number is (571)272-7765. The examiner can normally be reached on M-F, 8AM-5PM.

Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/  
Supervisory Patent Examiner, Art Unit 2629

asb  
Mar. 7, 2008